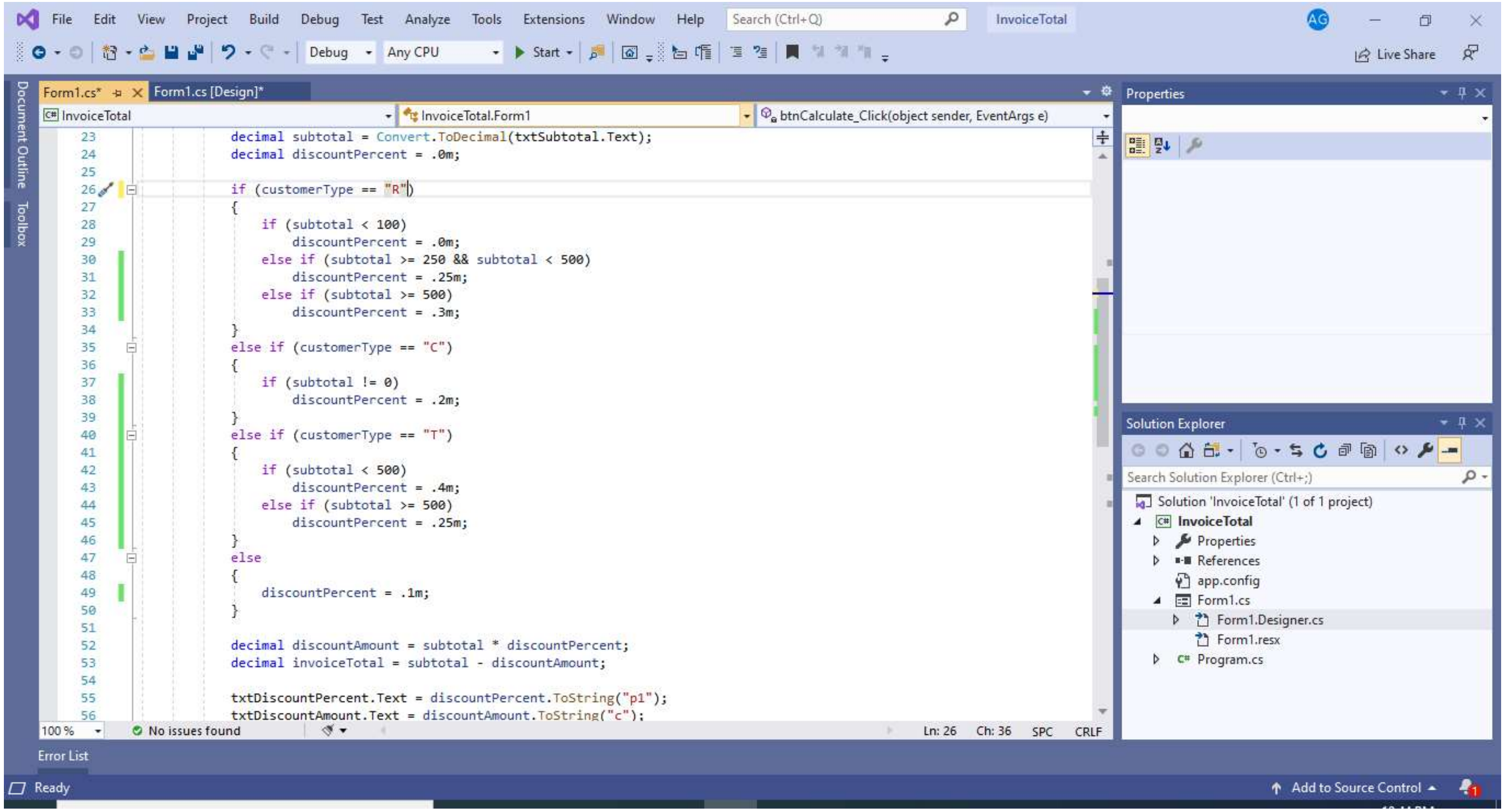
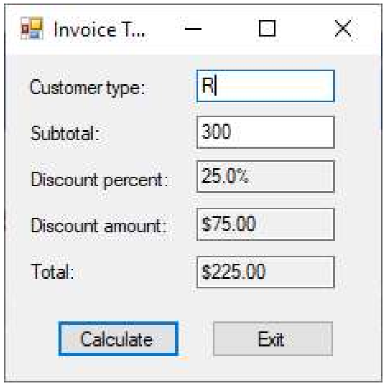
Andrea Griffis
CIS 123 C#
Assignment: Week 3 Practice Assignments (Individual)

Ex. 5-1 Enhance the Invoice Total application (Windows Forms project) (#1-7)

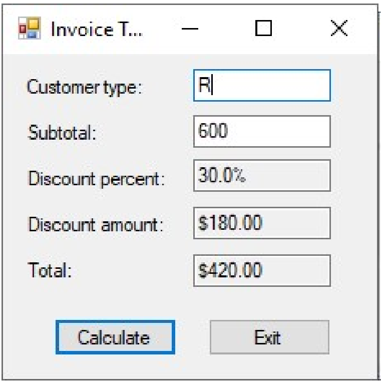
Open the application and change the if-else statement (#'s1-4)



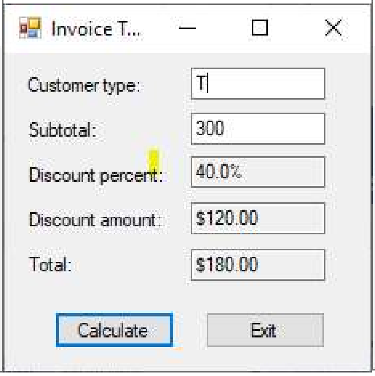
```
            decimal subtotal = Convert.ToDecimal(txtSubtotal.Text);
            decimal discountPercent = .0m;

            if (customerType == "R")
            {
                if (subtotal < 100)
                    discountPercent = .0m;
                else if (subtotal >= 250 && subtotal < 500)
                    discountPercent = .25m;
                else if (subtotal >= 500)
                    discountPercent = .3m;
            }
            else if (customerType == "C")
            {
                if (subtotal != 0)
                    discountPercent = .2m;
            }
            else if (customerType == "T")
            {
                if (subtotal < 500)
                    discountPercent = .4m;
                else if (subtotal >= 500)
                    discountPercent = .25m;
            }
            else
            {
                discountPercent = .1m;
            }

            decimal discountAmount = subtotal * discountPercent;
            decimal invoiceTotal = subtotal - discountAmount;

            txtDiscountPercent.Text = discountPercent.ToString("p1");
            txtDiscountAmount.Text = discountAmount.ToString("c");
```



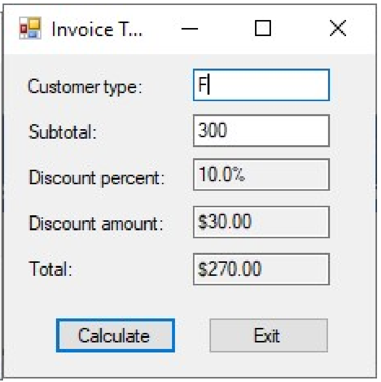
Customer type:	R
Subtotal:	300
Discount percent:	25.0%
Discount amount:	$75.00
Total:	$225.00



Customer type:	R
Subtotal:	600
Discount percent:	30.0%
Discount amount:	$180.00
Total:	$420.00

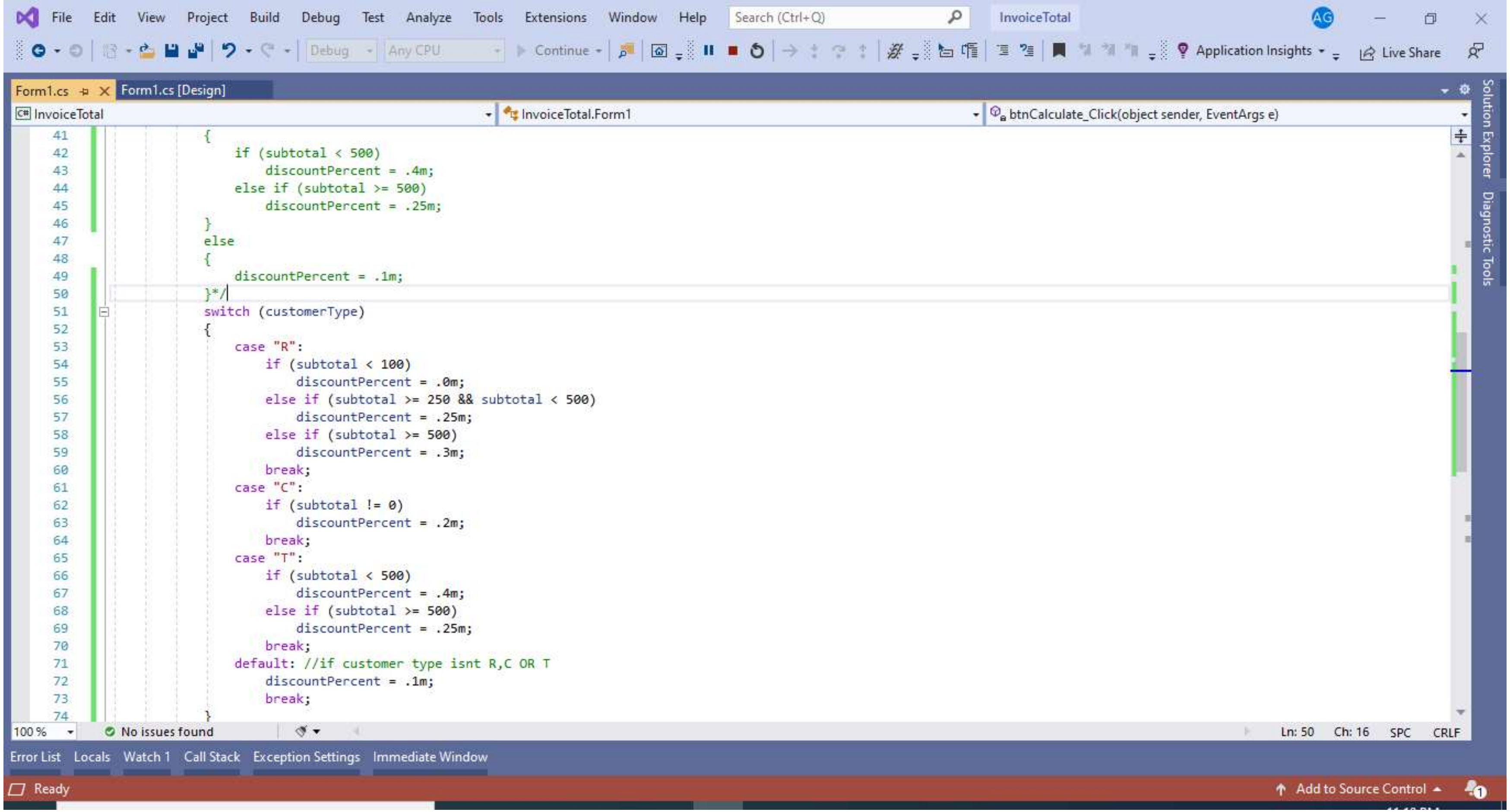


Customer type:	T
Subtotal:	300
Discount percent:	40.0%
Discount amount:	$120.00
Total:	$180.00

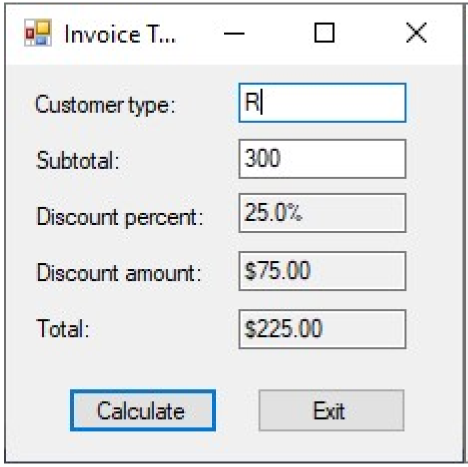


Customer type:	F
Subtotal:	300
Discount percent:	10.0%
Discount amount:	$30.00
Total:	$270.00

Use a switch statement with if-else statements to get the same results (#'s 5-7)



```
{
    if (subtotal < 500)
        discountPercent = .4m;
    else if (subtotal >= 500)
        discountPercent = .25m;
}
else
{
    discountPercent = .1m;
}*/
switch (customerType)
{
    case "R":
        if (subtotal < 100)
            discountPercent = .0m;
        else if (subtotal >= 250 && subtotal < 500)
            discountPercent = .25m;
        else if (subtotal >= 500)
            discountPercent = .3m;
        break;
    case "C":
        if (subtotal != 0)
            discountPercent = .2m;
        break;
    case "T":
        if (subtotal < 500)
            discountPercent = .4m;
        else if (subtotal >= 500)
            discountPercent = .25m;
        break;
    default: //if customer type isnt R,C OR T
        discountPercent = .1m;
        break;
}
```



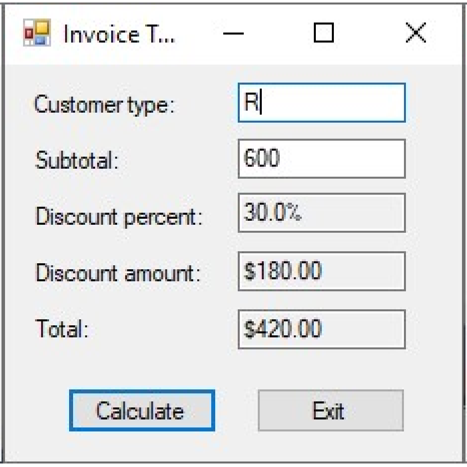
Customer type: R

Subtotal: 300

Discount percent: 25.0%

Discount amount: $75.00

Total: $225.00



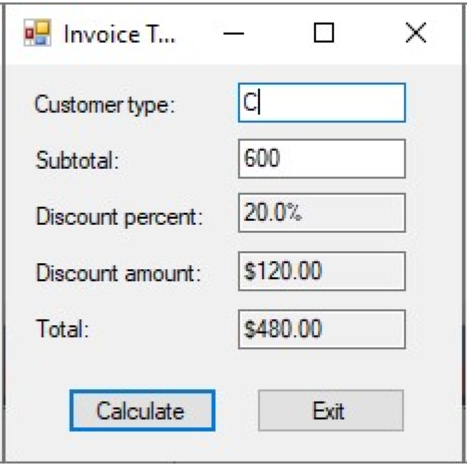
Customer type: R

Subtotal: 600

Discount percent: 30.0%

Discount amount: $180.00

Total: $420.00



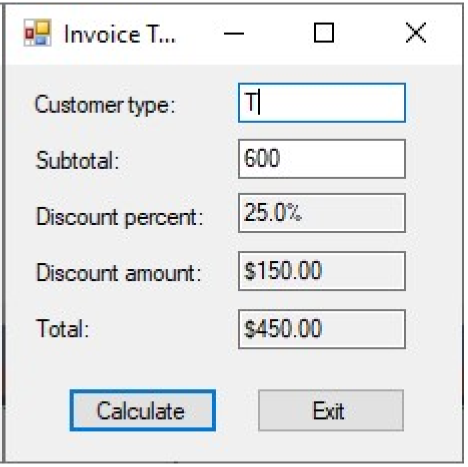
Customer type: C

Subtotal: 600

Discount percent: 20.0%

Discount amount: $120.00

Total: $480.00



Customer type: T

Subtotal: 600

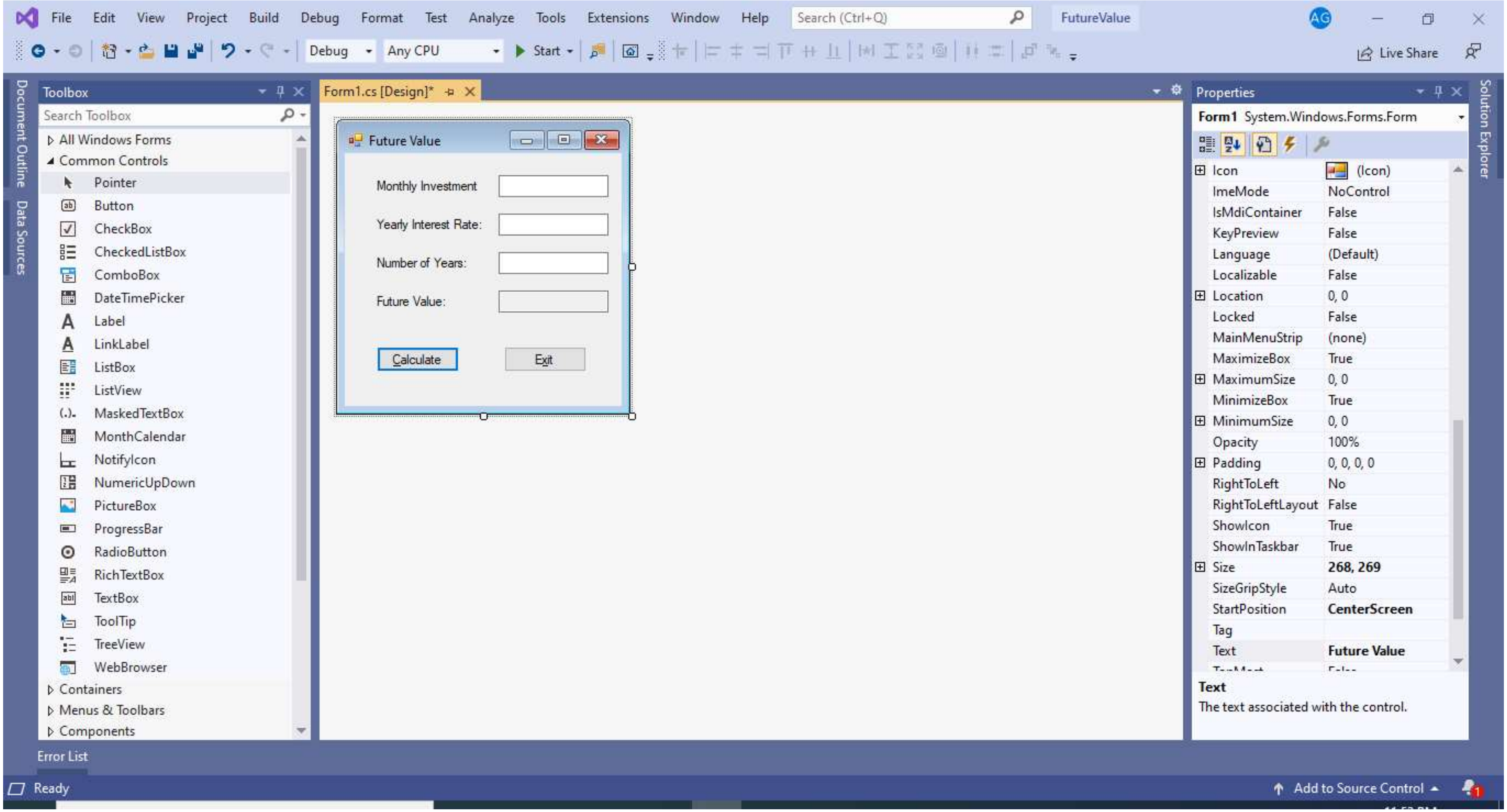
Discount percent: 25.0%

Discount amount: $150.00

Total: $450.00

Ex. 5-2 Develop the Future Value application (Windows Forms project)

Develop the form, write the code and test the application



Future Value

Monthly Investment

Yearly Interest Rate:

Number of Years:

Future Value:

Calculate   Exit

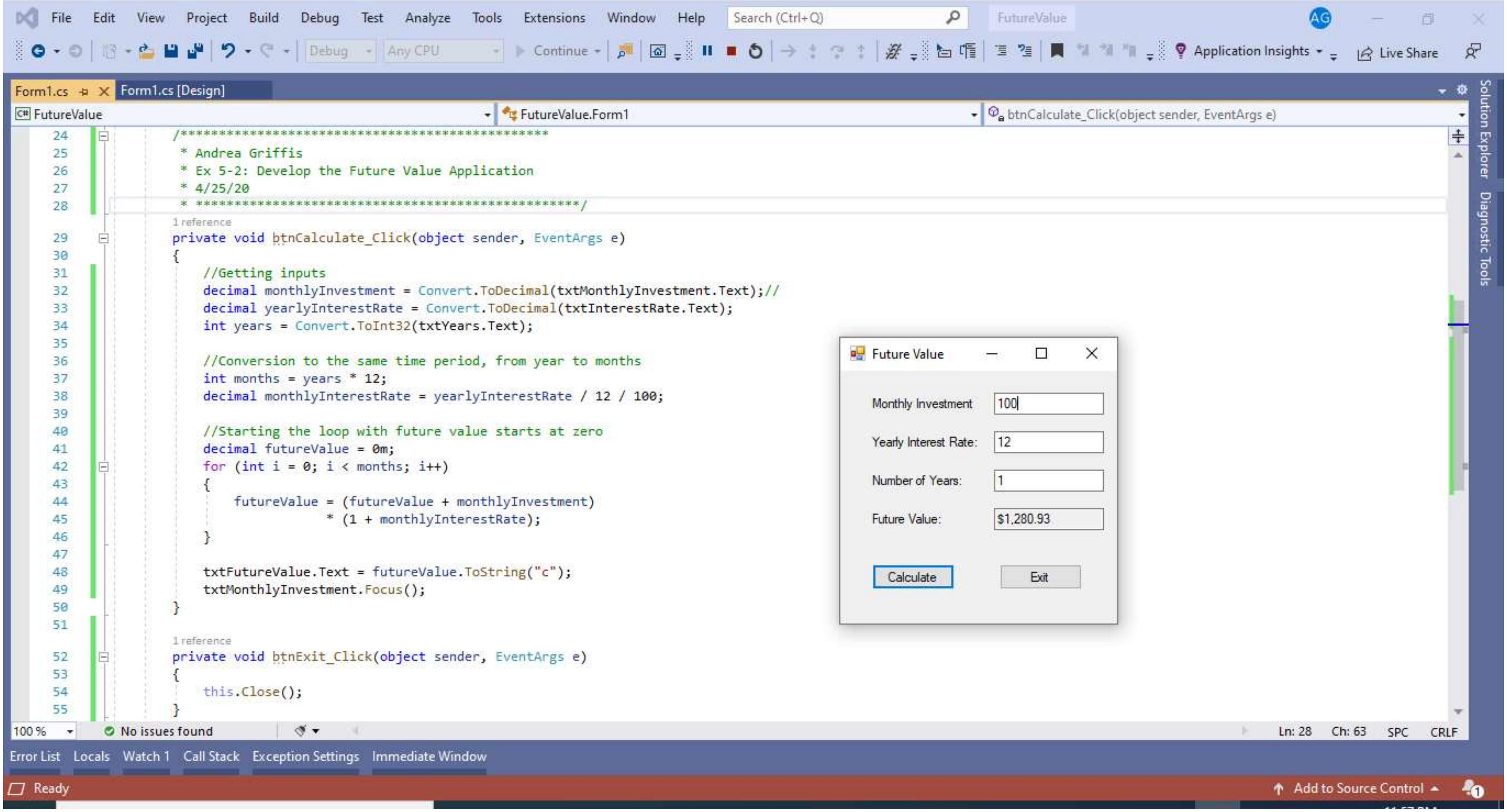
Properties

Form1 System.Windows.Forms.Form

⊞ Icon	(Icon)
ImeMode	NoControl
IsMdiContainer	False
KeyPreview	False
Language	(Default)
Localizable	False
⊞ Location	0, 0
Locked	False
MainMenuStrip	(none)
MaximizeBox	True
⊞ MaximumSize	0, 0
MinimizeBox	True
⊞ MinimumSize	0, 0
Opacity	100%
⊞ Padding	0, 0, 0, 0
RightToLeft	No
RightToLeftLayout	False
ShowIcon	True
ShowInTaskbar	True
⊞ Size	**268, 269**
SizeGripStyle	Auto
StartPosition	**CenterScreen**
Tag	
Text	**Future Value**

Text

The text associated with the control.

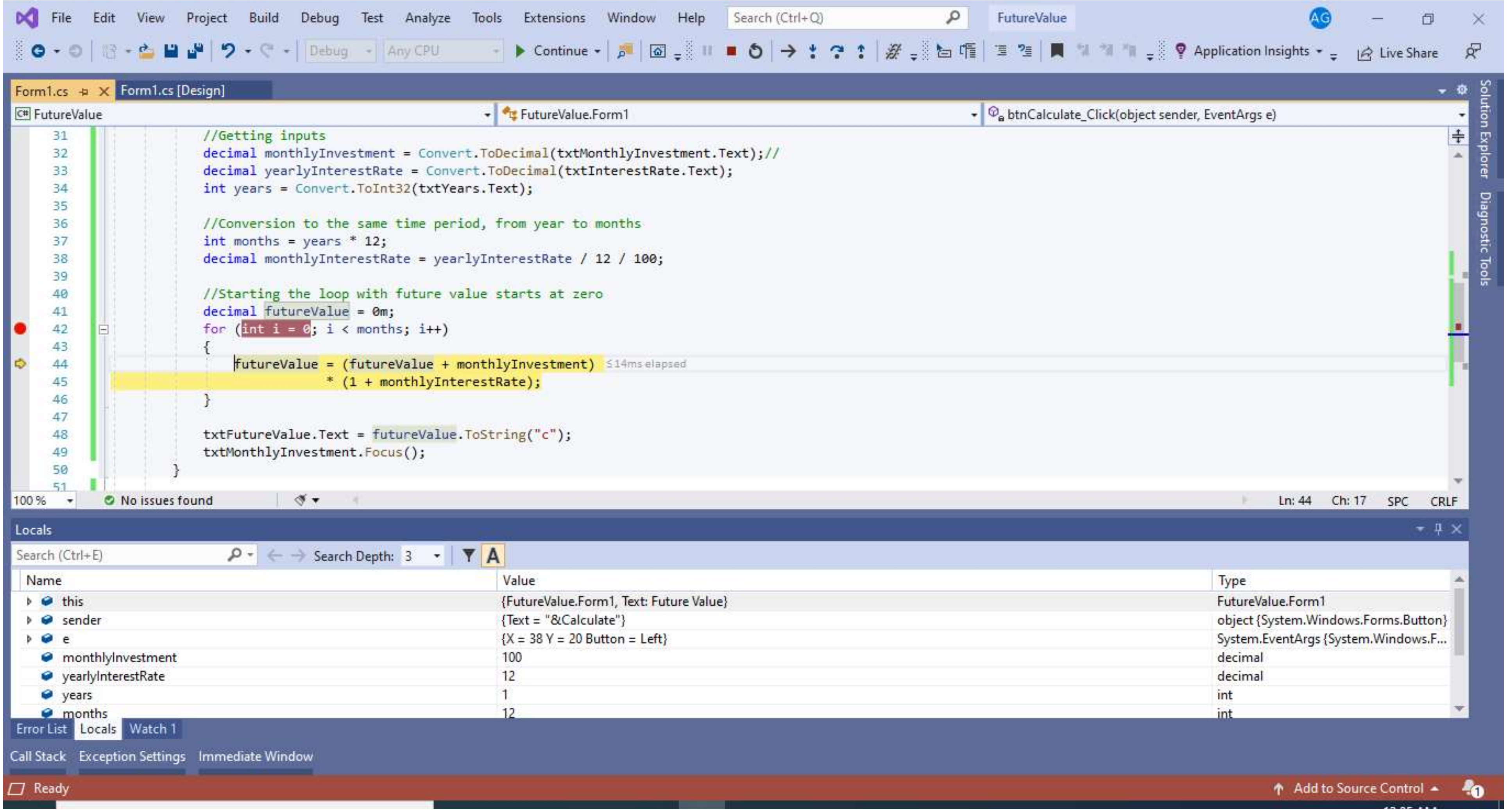


```
        /**************************************************
         * Andrea Griffis
         * Ex 5-2: Develop the Future Value Application
         * 4/25/20
         * *************************************************/
        1 reference
        private void btnCalculate_Click(object sender, EventArgs e)
        {
            //Getting inputs
            decimal monthlyInvestment = Convert.ToDecimal(txtMonthlyInvestment.Text);//
            decimal yearlyInterestRate = Convert.ToDecimal(txtInterestRate.Text);
            int years = Convert.ToInt32(txtYears.Text);

            //Conversion to the same time period, from year to months
            int months = years * 12;
            decimal monthlyInterestRate = yearlyInterestRate / 12 / 100;

            //Starting the loop with future value starts at zero
            decimal futureValue = 0m;
            for (int i = 0; i < months; i++)
            {
                futureValue = (futureValue + monthlyInvestment)
                            * (1 + monthlyInterestRate);
            }

            txtFutureValue.Text = futureValue.ToString("c");
            txtMonthlyInvestment.Focus();
        }

        1 reference
        private void btnExit_Click(object sender, EventArgs e)
        {
            this.Close();
        }
```

Future Value

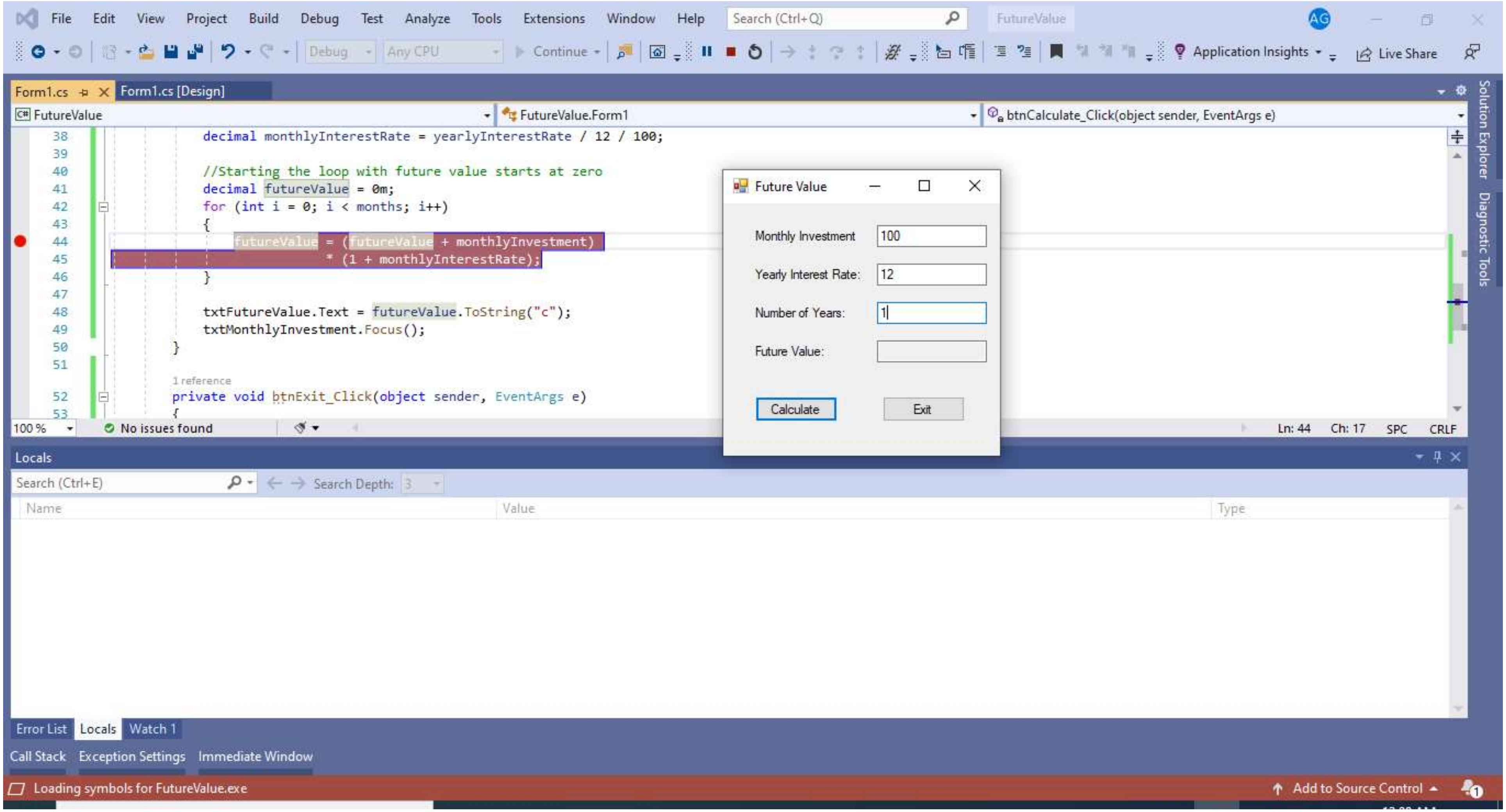
Monthly Investment	100
Yearly Interest Rate:	12
Number of Years:	1
Future Value:	$1,280.93

Set breakpoints and step through the loops



```
            //Getting inputs
            decimal monthlyInvestment = Convert.ToDecimal(txtMonthlyInvestment.Text);//
            decimal yearlyInterestRate = Convert.ToDecimal(txtInterestRate.Text);
            int years = Convert.ToInt32(txtYears.Text);

            //Conversion to the same time period, from year to months
            int months = years * 12;
            decimal monthlyInterestRate = yearlyInterestRate / 12 / 100;

            //Starting the loop with future value starts at zero
            decimal futureValue = 0m;
            for (int i = 0; i < months; i++)
            {
                futureValue = (futureValue + monthlyInvestment)
                            * (1 + monthlyInterestRate);
            }

            txtFutureValue.Text = futureValue.ToString("c");
            txtMonthlyInvestment.Focus();
        }
```

Name	Value	Type
this	{FutureValue.Form1, Text: Future Value}	FutureValue.Form1
sender	{Text = "&Calculate"}	object {System.Windows.Forms.Button}
e	{X = 38 Y = 20 Button = Left}	System.EventArgs {System.Windows.F...
monthlyInvestment	100	decimal
yearlyInterestRate	12	decimal
years	1	int
months	12	int



```
            decimal monthlyInterestRate = yearlyInterestRate / 12 / 100;

            //Starting the loop with future value starts at zero
            decimal futureValue = 0m;
            for (int i = 0; i < months; i++)
            {
                futureValue = (futureValue + monthlyInvestment)
                    * (1 + monthlyInterestRate);
            }

            txtFutureValue.Text = futureValue.ToString("c");
            txtMonthlyInvestment.Focus();
        }

        1 reference
        private void btnExit_Click(object sender, EventArgs e)
        {
```

No issues found

Ln: 44 Ch: 17 SPC CRLF

Future Value

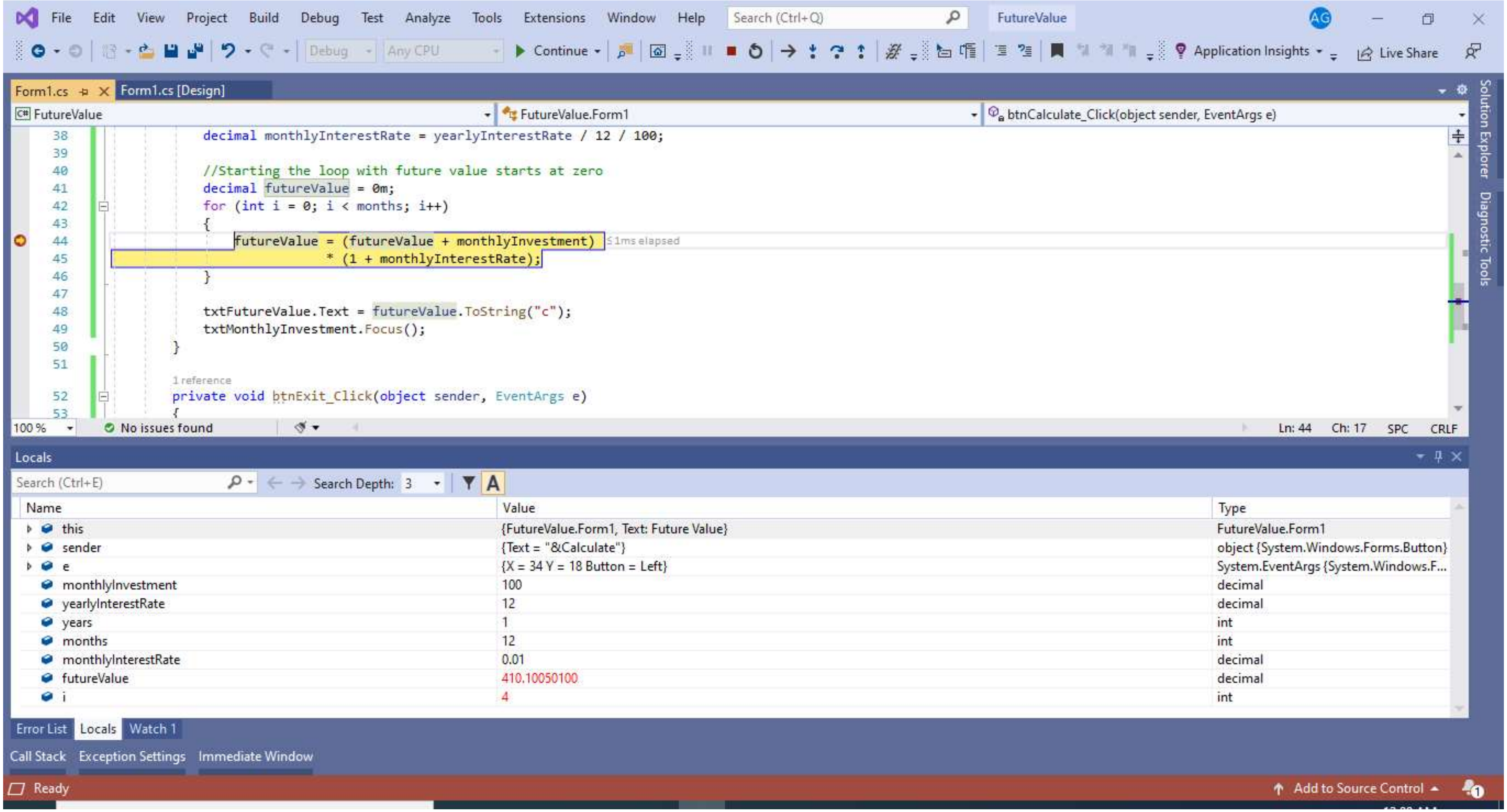
Monthly Investment: 100

Yearly Interest Rate: 12

Number of Years: 1

Future Value:

Loading symbols for FutureValue.exe



```
            decimal monthlyInterestRate = yearlyInterestRate / 12 / 100;

            //Starting the loop with future value starts at zero
            decimal futureValue = 0m;
            for (int i = 0; i < months; i++)
            {
                futureValue = (futureValue + monthlyInvestment)
                    * (1 + monthlyInterestRate);
            }

            txtFutureValue.Text = futureValue.ToString("c");
            txtMonthlyInvestment.Focus();
        }

        private void btnExit_Click(object sender, EventArgs e)
        {
```

Name	Value	Type
this	{FutureValue.Form1, Text: Future Value}	FutureValue.Form1
sender	{Text = "&Calculate"}	object {System.Windows.Forms.Button}
e	{X = 34 Y = 18 Button = Left}	System.EventArgs {System.Windows.F...
monthlyInvestment	100	decimal
yearlyInterestRate	12	decimal
years	1	int
months	12	int
monthlyInterestRate	0.01	decimal
futureValue	410.10050100	decimal
i	4	int